

NASA Advisory Council
National Aeronautics and Space Administration
Washington, DC 20546

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Stanford University

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Professor of Cardiovascular Medicine
Cornell University Medical College

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Professor of Civil and Environmental Engineering
Massachusetts Institute of Technology

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Director, Center for Space Research
Massachusetts Institute of Technology

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Massachusetts Institute of Technology

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Cornell University

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Chief, Division of Cardiothoracic Surgery
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Executive Vice President (Ret.)
Lockheed Martin Corporation

June 14, 1999

Mr. Daniel S. Goldin
Administrator
National Aeronautics and
Space Administration
Washington, DC 20546

Dear Mr. Goldin:

We had a very substantive meeting at Kennedy Space Center (KSC) on May 20-21, 1999. The Council was pleased with the overall quality of the presentations and enjoyed the tour of KSC led by Mr. Bob Sieck. While it was unfortunate that the Council was not able to witness the launch of STS-96, we were able to view and walk around the orbiter on the Pad. We will try to view a launch in the future.

The Council was briefed by Mr. Joseph Rothenberg and Mr. Tommy Holloway concerning the status of the International Space Station (ISS) and their efforts at a Probability Risk Assessment (PRA) for station. The Council was pleased to hear and see (during our tour) the progress the ISS program is making. We are heartened by the news that the Russian Service Module appears on track for a November launch.

However, the Council continues to have concerns about a Probability Risk Assessment for ISS. Mr. Holloway provided the Council with the status of PRA development within the program office. He indicated that the ISS PRA will be both a "top-down" and "bottoms-up" process, and will be performed on a phased/staged basis. The proposal included use of an existing risk management contract to perform the PRA. The Council is concerned that a contractor with appropriate experience be used for this activity and wants assurance that the proposed PRA plan will meet this concern. Further, we think that risk analysis must consider the two-legged problem of induced risk, (i.e. the random screwdriver problem). The Council has asked the ISS program office and the selected contractor for a status briefing at our August meeting.

The Council was also briefed by Mr. Michael Suffredini, Manager of the Space Station Payloads Office, who discussed the outfitting of the ISS for research. Mr. Suffredini provided the Council with an excellent overview. However, the loss of funding for ISS utilization is a severe problem that needs further attention. The Council is also interested in Mr. Suffredini providing a breakout of funding for each of the ISS research areas. It was also suggested the program office consider adding a principle investigator for engineering research.

Dr. Dan Mulville briefed the Council on the status of Faster, Better, Cheaper (FBC) and the Space Transportation Architecture Study (STAS). He provided us with the "terms of engagement" for institutionalizing the FBC throughout the agency. He also agreed to have Mr. Tony Spear brief the Council at our December meeting.

Dr. Mulville also updated us on the status of the STAS. He explained the common conclusions that existed with the contractors and provided an initial Architecture roadmap. He stated that NASA is now in the process of developing the investment strategy, and is bringing forth the integrated architectures and budget recommendations to you and OMB in the June/July timeframe. However, before the agency finalizes future investment decisions, the Council believes that NASA should examine in greater details its nine issues from our February meeting. We asked Dr. Mulville to address these issues, but due to severe time constraints, he was only able to touch very briefly on each item. The Council requests the agency respond more formally to these nine issues/observations that are listed in my March 23, 1999, letter to you.

The Council also heard several reports by committees. The Council's formal recommendations from these reports are attached in Enclosure A. There are two issues raised by the committees that need additional emphasis. First, the Minority Business Resource Advisory Committee reported several recommendations for establishing agency goals for contracting with Historically Black Colleges and Universities and Minority Institutions. These were not adopted as formal recommendations, but General Dailey agreed to look at these and report to the Council at our next meeting.

Second, the Council received several recommendations from the Earth System Science and Application Advisory Committee and the Space Science Advisory Committee on the Consolidated Space Operations Contract (CSOC). While the Council did not accept all of the recommendations, it does feel that the science or user community needs a greater voice in the process.

Finally, the Council decided to form ad hoc subgroups around our six theme areas – Safety, Technology, Launch Vehicles, ISS, FBC, and Aging Workforce. We will have our first subgroup meetings at our next meeting in hopes of making further progress in these areas. The Council will meet on August 3-4, 1999, at the Glenn Research Center. Once again, the Council would like to express its thanks to everyone at Kennedy Space Center that made our May meeting enjoyable and productive.

Sincerely,

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Bradford W. Parkinson
Chair

Enclosure

Enclosure

NASA ADVISORY COUNCIL (NAC)
Center for Space Education
Kennedy Space Center, FL
May 20-21, 1999

RECOMMENDATIONS

- 1) The NAC accepted the following recommendations from the TCAC:
 - a) The Agency should conduct a top down, mission- and vision-driven definition of its required and core competencies. The core competencies should be benchmarked against "competitors" to evaluate "world class" standing. This study should then be used for planned hiring and deployment of resources, for a rationale for commercialization/privatization, and the rationale for Broad Area Peer Review (BAPR) decisions.
 - b) The Agency should establish "reference goals" and specific metrics for the near/mid/far term mix of research. The goals and metrics should then be tracked in the yearly budget cycle during the OMB and Congressional review, tracked during mid-year "reprogramming," and be the basis for "rules" to use during "reprogramming."
 - c) The Enterprises should develop technology planning and inventory processes that are indexed to a "reference template," so that cross-Enterprise coordination and transparency is facilitated. This process should include an explicit prioritization of goals for each Enterprise.
- 2) The NAC forwarded the following items from the Minority Business Resource Advisory Committee as tentative recommendations to Gen. Dailey pending his analysis:
 - a) The Federal Streamlining Act of 1994 requires that NASA establish an agency-wide contracting goal for Historically Black Colleges and Universities (HBCU's) and Minority Institutions (MI's). NASA has not yet established such a goal. The Committee recommends that NASA establish an agency-wide goal for contracting with HBCU's and MI's.
 - b) In order to increase Small Disadvantaged Business (including women-owned businesses) participation in NASA's technology transfer-commercialization activity, NASA should establish a user friendly process for SDBs to receive licenses from NASA to commercialize NASA technology. The Committee recommends that NASA establish a 3-year pilot program aimed at increasing the number of SDBs by doing the following at a minimum:
 - i) Direct each Center to identify and select ten technologies with high commercial potential that might be suitable for SDBs. Such

technologies should be presented to SDBs through diverse mediums in conjunction with the Headquarters Office.

- ii) The Commercialization Office at each Center should assist SDBs in the identification of potential partners in the areas of financing, developing, utilizing, and/or marketing the technologies.
- iii) Licenses should be awarded to those SDBs which are able to successfully commercialize the selected technologies.
- iv) Agency-wide metrics should be kept on the number of licenses awarded to SDBs on an annual basis.

- 3) The NAC accepted the following recommendation on the Centrifuge from the LMSAAC:

The timely development and deployment, as well as the integrity, of the ISS Centrifuge infrastructure should be maintained at the highest priority. Any modifications should consider the implications for astronaut safety, performance of scientific studies, and the impact on the timeline for the deployment of the centrifuge before being finalized.

- 4) The NAC accepted the following recommendations on SOMO from the ESSAAC/SScAC SOMO Study Team:

- 1. Customer feedback: A user's group should be formed that communicates to both the SOMO head and the Space Operations Board of Directors, to provide direct feedback from the end users. This group should review performance metrics and bring user concerns to the attention of Agency managers. Because there are already channels for such advice within NASA, the users group should consist primarily of scientists external to NASA.
- 2. Award Fee Determination: Code Y and Code S senior management, who will receive the reports of the user's group, should participate in determination of the CSOC award fee.

- 5) The NAC accepted the following recommendation of the ESSAAC:

We recommend that NASA take the initiative to (organize an interagency group that can) formulate a plan, with implementation mechanisms, that will deal , in an expeditious manner , with the problem of guaranteeing long term, consistent, and well calibrated measurements of variables related to climate change indicators.